REMARKS

Claims 1-23 are pending in the application. Claims 1, 3, 7-8, 10-11, 13, and 16 have been amended to more clearly describe the claimed invention. Claims 24-34 have been added. No new matter has been added. Reconsideration and allowance of this application as amended are respectively requested.

Claims 1-6, 10-11, 13-14, and 16-23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. published patent application 2002/0179820 to Stark ("Stark"). The rejection is respectfully traversed.

As amended, claim 1 recites an apparatus comprising, *inter alia* "an isolation circuit coupled to each first bus for selectively isolating each group from the readout circuit."

Stark does not anticipate the claimed invention because Stark does not disclose all of the limitations recited by claim 1. Unlike the current invention which utilizes a group/subgroup circuit structure, Stark discloses a method of substantially isolating the top and bottom halves of an image sensor array from each other, wherein charges from the upper half of cells and the lower half of cells are respectively sent to a top and bottom amplifier. (Abstract).

Stark teaches an isolation of cells but not as defined by the claimed invention. Stark discloses "each column of sensor array is separated into two or more electrically isolated portions, such as into an upper half and a lower half." (p. 4, [0071]). Stark does not disclose or even suggest an isolation circuit "for selectively isolating each group from the readout circuit," as recited by claim 1. Instead, Stark teaches electrical isolation by arranging a top half of cells to be read out through one amplifier and the bottom half of the cells "to be read out through a separate sense amplifier." (p. 4, [0071]).

For at least these reasons, withdrawal of the rejection of claim 1 is respectfully requested. Claims 2-15 and 24 depend from claim 1, and should be allowable for at least these reasons and for the unique combinations recited therein.

Similar to claim 1, new claim 25 recites, *inter alia*, "selectively isolating from said readout circuit the groups of pixels not associated with the selectively enabled group select circuit." Because Stark does not teach or suggest selectively isolating groups of pixels from said readout circuit as recited by claim 25, Stark does not anticipate the claimed invention. For at least these reasons, claim 25 is respectfully submitted to be allowable. Claims 26-30 depend from claim 25 and should be allowable for at least these reasons and for the unique combinations recited therein.

Claim 16 recites, *inter alia*, "subsequently disabling the group select circuit to electrically isolate the charge mode read-out amplifier from the respective set of subgroup select circuits." Stark does not teach or even suggest all of the limitations of claim 16. Stark teaches an all together different method than the one recited by claim 16. Specifically, Stark teaches connecting the top cluster 504A of each column to a column line 506, and reading out all of the rows of the top cluster. Subsequently on each column 500, the next cluster 504B is connected to the column line to read out all of the rows of that cluster. The method continues until "all the rows of the all of the columns 500 of the image sensor are read out." (p. 5, [0081], [0082]). Stark does not therefore teach "selectively enabling a group select circuit to electrically couple a charge mode read-out amplifier to a respective set of subgroup select circuits. . .and subsequently disabling the group select circuit to electrically isolate the charge mode read-out amplifier from the respective set of subgroup select circuits," as recited by claim 16.

For at least these reasons, withdrawal of this rejection is respectfully requested. Claims 17 and 18 depend from claim 16, and are therefore submitted to be allowable for at least these reasons and for the unique combinations recited therein.

Claim 19 recites a method comprising, *inter alia*, "selectively enabling a supergroup select circuit from a set of supergroup select circuits and a series-connected group select circuit from an associated set of group select circuits." Because Stark does not disclose or even suggest all the elements of claim 19, nor disclose a method of operating the elements as recited by claim 19, Stark does not anticipate the claimed invention.

The Office Action identifies the buffer 416 of Stark as the "supergroup select circuit" of claim 19. (Office Action at p. 5). Claim 19, however, recites that the supergroup select circuit is from a "set of supergroup select circuits." Stark does not disclose or even suggest a *set* of supergroup select circuits. Moreover, claim 19 recites that while one group select circuit is enabled, the associated subgroup select circuits are read out "in a sequential manner through the series-connected group select circuit and supergroup select circuit to the charge mode amplifier." Under the Examiner's assumption that the buffer 416 is a supergroup select circuit, Stark could not read out a charge through the supergroup select circuit (buffer 416) to the amplifier (410 or 412)—as recited by claim 19—because the charge has already passed through the amplifier. (See Stark, FIG. 4).

For at least these reasons, Stark does not anticipate or even suggest the method of operating the elements recited by claim 19. Claims 20-23 depend from claim 19 and are, therefore, allowable for at least these reasons. Withdrawal of this rejection is respectfully requested.

Similarly, new claim 34 recites, *inter alia*, an imager device comprising image sensors organized into "supergroups" with associated "supergroup select circuits." Because Stark does not teach or suggest supergroups or supergroup select circuits as recited by claim 34, Stark does not anticipate the claimed invention. For at least these reasons, claim 34 is respectfully submitted to be allowable.

Claims 7-9 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stark. The rejection is respectfully traversed. Each of claims 7-9 and 15

depend from claim 1, and are therefore, respectfully submitted to be allowable for at least the reasons explained above regarding the allowance of claim 1.

Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Stark in view of U.S. Patent No. 6,512,546 to Decker et al ("Decker"). The rejection is respectfully traversed. Claim 12 depends directly from claim 1 and therefore contains all the limitations of claim 1. For whatever Decker teaches regarding the use of NMOS transistor switches, Decker does not cure the deficiencies of Stark explained above with respect to claim 1. Withdrawal of this rejection is, therefore, respectfully requested.

Finally, new claim 31 recites, *inter alia*, an imager device comprising an image sensor array organized into groups of sensors, "each group comprising a plurality of columns of an image sensor array." As discussed above, Stark does not teach or disclose sensors organized into groups comprising columns of sensors as recited by claim 31. Instead, Stark teaches "each column of sensor array is separated into two or more electrically isolated portions, such as into an upper half and a lower half." (p. 4, [0071]). Stark also teaches breaking each half-column of the array into "clusters" comprising a plurality of rows. (p. 5, [0078] – [0079]). Stark does not, however, teach or suggest the limitations of claim 31, and accordingly, claim 31 is allowable for at least these reasons. Claims 32-33 depend from claim 31 and are also allowable at least for these reasons.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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